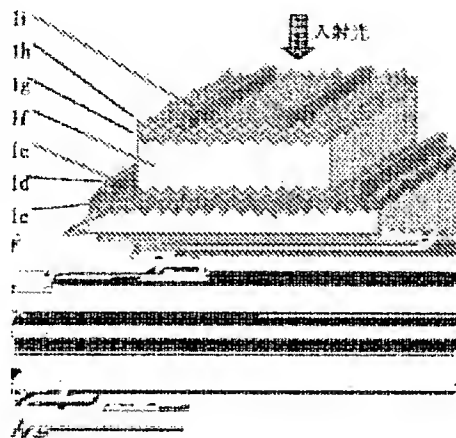


**THIN FILM CRYSTALLINE SILICON SOLAR CELL****Publication number:** JP2002111017 (A)**Publication date:** 2002-04-12**Inventor(s):** FUKUI KENJI; SHINRAKU KOUICHIROU; SHIROMA HIDEKI; OKUI HIROKI**Applicant(s):** KYOCERA CORP**Classification:****- International:** H01L31/04; H01L31/04; (IPC1-7): H01L31/04**- European:****Application number:** JP20000301419 20000929**Priority number(s):** JP20000301419 20000929**Abstract of JP 2002111017 (A)**

**PROBLEM TO BE SOLVED:** To solve the problems of characteristic deterioration due to a short circuit or the like caused by a ruggedness, not obtaining light confinement effects and of a low short circuiting current density. **SOLUTION:** A thin film crystalline silicon solar cell comprises a metal film 1c to become the rear electrode, silicon semiconductor films 1e, 1f and 1g having a semiconductor junction, a transparent conductive film 1h, and a metal film 1i to become a front electrode laminated on a board 1a. In this case, the surface of the board 1a has a fine rugged structure 1b, and a curve for connecting vertexes of the protrusions becomes a recess shape. A distance between vertexes of the adjacent protrusions is 0.01 to 5  $\mu\text{m}$ ; A difference between high and low heights between a lowermost part and the vertex of the curve for connecting the vertexes of the adjacent protrusions is 0.01 to 1  $\mu\text{m}$ .



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